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09/129,883 08/06/98 YAMAGISHI H Q46699

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EXAMINER

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Paper No. 21

Application Number: 09/129,883
Filing Date: August 06, 1998
Appellant(s): YAMAGISHI ET AL.

Paul J. Wilson (Reg. No. 45,879)
For Appellant

EXAMINER'S ANSWER

This is in response to appellant's brief on appeal filed 16 July 2001.

(1) *Real Party in Interest*

A statement identifying the real party in interest is contained in the brief.

(2) *Related Appeals and Interferences*

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

(3) *Status of Claims*

The statement of the status of the claims contained in the brief is correct.

(4) *Status of Amendments After Final*

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) *Summary of Invention*

The summary of invention contained in the brief is correct.

(6) *Issues*

The appellant's statement of the issues in the brief is correct.

(7) Grouping of Claims

The rejection of claims 3-16 stand or fall together because appellant's brief does not include a statement that this grouping of claims does not stand or fall together and reasons in support thereof. See 37 CFR 1.192(c)(7).

(8) Claims Appealed

The copy of the appealed claims contained in the Appendix to the brief is correct.

(9) Prior Art of Record

5,695,413	Yamagishi	12-1997
5,779,563	Yamagishi	07-1998
5,816,942	Hayashi	10-1998

(10) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC & 103

Art Unit: 3711

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 3-15 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Yamagishi (5,695,413) in view of Yamagishi (5,779,563).

Yamagishi (413) discloses a core having a distortion of 3.5 mm under an applied load of 100 kg, an outer cover layer having a Shore D hardness in a range of 50-60, an inner cover layer having a Shore D hardness in a range of 28-68, an inner cover having a gage of 1.3-2.4 mm, an outer cover having a gage of 1.3-2.4mm (Fig. 2), and products of the Shore D hardness of an inner cover layer multiplied by the Shore D hardness of an outer cover layer in form that each layer has a Shore D hardness and the products would be in a range of 1500-4000 (Fig. 2).

Yamagishi (413) lacks dimples. Yamagishi (563) discloses a plurality of dimples, at least three types of dimples which are different in diameter, a largest diameter of 4.150 mm, a dimple depth for a largest size dimple being .210 mm, Vo being .48 for a largest size, Vo for the ball as a hole being .48, dimples of a smallest type having a diameter of 3.5 mm and a depth of .210 mm (Type II, Table 3) in order to have a ball with improved flying distance, controllability, straight travel, roll and durability (Col. 1, Lns. 50-57). In addition, Yamagishi (563) discloses a Vo in a range of .40-.65 in order to prevent a stall and a descending trajectory (Col. 5, Lns. 38-47). Yamagishi

Art Unit: 3711

(563) does not specifically disclose a Vr but clearly as shown in enclosure to amendment dated 8 March 2000 type II dimples have a Vr of .996.

It would have been obvious to include in the ball of Yamagishi (413) to have a product of Shore D hardness of an inner and outer cover layer to be 1500-3000 in order to have a ball which minimizes damage when being impacted by a club.

In view of the patent of Yamagishi (563) it would have been obvious to modify the ball of Yamagishi (413) to have type II dimples as defined by the claims in order to utilize a dimple pattern available in the market place to improve flying distance, controllability, straight travel, and roll.

2. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hayashi in view of Yamagishi (5,779,563).

Hayashi discloses a core having a distortion of 2.8-3.0 mm under an applied load of 100 kg (Ref. No. 4, Col. 2, Lns. 32-34), an outer cover layer having a Shore D hardness in a range of 30-70 (Ref. No. 3, Col. 3, Lns. 62-64), an inner cover layer having a Shore D hardness in a range of 33-53 (Ref. No. 5, Col. 3, Lns. 13-18), products of the Shore D hardness of an inner cover layer multiplied by the Shore D hardness of an outer cover layer in form that each layer has a Shore D hardness and the products would be in a range of 1500-3700, and dimples on a cover surface having a conventional pattern by a well known method (Col. 4, Lns. 26-30).

Hayashi lacks a specific dimple pattern. Yamagishi (563) discloses a plurality of dimples, at least three types of dimples which are different in diameter (Type II, Table 3)

Art Unit: 3711

in order to have a ball with improved flying distance, controllability, straight travel, roll and durability (Col. 1, Lns. 50-57). Yamagishi (563) does not specifically disclose a Vr but clearly as shown in enclosure to amendment dated 8 March 2000 type II dimples have a Vr of .996.

It would have been obvious to include in the ball of Hayashi a product of Shore D hardness of an inner and outer cover layer to be 2000-3000 in order to have a ball which minimizes damage when being impacted by a club.

In view of the patent of Yamagishi (563) it would have been obvious to modify the ball of Hayashi to have type II dimples as defined by the claims in order to utilize a dimple pattern available in the market place to improve flying distance, controllability, straight travel, and roll.

Response to Amendment

3. The argument that it is improper to use the reference of Yamagishi (413) since Yamagishi (413) does not disclose any dimples, Vr and Vo is disagreed with. Dimples on the surface of a cover is the most common surface design and it would be obvious for one skilled in the art to place a known dimple pattern on the ball of Yamagishi (413) in order to make a ball fly better after being impacted by a club. The argument that it is improper to use the reference of Yamagishi (413) since Yamagishi (413) does not disclose the product of a Shore D hardness of an outer layer of the core and a cover layer is disagreed with. Yamagishi (413) disclosed a range of hardness for

Art Unit: 3711

both layers and any combination would have been an suitable otherwise Yamagishi (413) would have stated as such. The argument that it is improper to combine the teachings of Yamagishi (563) with Yamagishi (413) since Yamagishi (563) does not disclosed the claimed distortion values as claimed is disagreed with. Yamagishi (563) was not used to show distortion values of a core but to show a known dimple pattern used on golf balls.

(11) Response to Argument

In the arguments filed 16 July 2001, the appellant argues:

1. It is improper to combine the references of Yamagishi (563) with Yamagishi (413) since Yamagishi (563) must be taken in its entirety including distortion values.
2. It is improper to use Yamagishi (413) since the examiner relied on this reference with respect to the product of the Shore D hardness of a cover outer layer and a cover inner layer not for what Yamagishi (413) discloses by what it potentially could state.
3. It is improper to use the reference of Yamagishi (413) since there is no criticality and thus no disclosure of the proportion of dimples VR (%) and the value VO of the dimples.

Art Unit: 3711

4. It is improper to use the reference of Yamagishi (413) since Yamagishi (413) does not disclose the product of a Shore D hardness of a cover inner layer and the Shore D hardness of a cover outer layer. As such, Yamagishi (413) does not disclose in any way the relationship between the product of Shore D hardness of the two layers and VR.

5. There is no motivation to combine Yamagishi (563) with Yamagishi (413).

6. It is improper to use the reference of Yamagishi (563) since Yamagishi (563) does not disclose a solid core having a distortion of 2.8 to 6.5 mm under a load of 100 kg or a product of Shore D hardness in relationship to VR.

7. It is improper to use the reference of Yamagishi (413) since it would not be obvious to vary the value VR to be with the required relationship to the product of Shore D hardness.

8. It is improper to combine the references of Hayashi (942) and Yamagishi (563) since Hayashi discloses a thread wounded ball and Yamagishi (563) discloses a multi-piece solid ball each having fundamentally different dynamic characteristics.

9. It is improper to combine the references of Hayashi (942) and Yamagishi (563) since there is no motivation to do such.

10. It is improper to combine the references of Hayashi (942) and Yamagishi (563) since Yamagishi (563) does not disclose a relationship between the product of Shore D hardness and dimple configuration.

11. With respect to item 1, the argument that it is improper to combine the references of Yamagishi (563) with Yamagishi (413) since Yamagishi (563) must be taken in its entirety including distortion values is disagreed with. Yamagishi (413) discloses a distortion value of at least 3.5 mm (Fig. 1) and Yamagishi (563) discloses a distortion value of at 3.5 mm and higher (Col. 3, Lns. 43-52).

12. With respect to item 2, the argument that it is improper to use Yamagishi (413) since the examiner relied on this reference with respect to the product of the Shore D hardness of a cover outer layer and a cover inner layer not for what was disclosed but by what it potentially could state is disagreed with. Clearly Yamagishi has a product since it has disclosed a cover outer layer and a cover inner layer (core outer layer) with disclosed hardnesses (Fig. 2). A product of these hardnesses is inherent for the ball of Yamagishi (413). Yamagishi (413) discloses a range of hardness for the outer layer and the inner layer therefore any combination is a suitable choice otherwise Yamagishi (413) would not have disclosed these ranges. And combinations in these ranges have a product as defined by the claims. In fact, combinations in the middle of the hardness ranges have a product as defined by the claims.

13. With respect to item 3, the argument that it is improper to use the reference of Yamagishi (413) since there is no criticality and thus no disclosure of the proportion of dimples VR (%) and the value VO of the dimples is disagreed. Clearly, golf balls having dimples is the best known way to make a surface for golf balls and dimple patterns will have a VR (%) and VO. It is not an issue of criticality but of having a suitable VR (%) and VO which those values which are claimed are suitable selections.

14. With respect to item 4, the argument that it is improper to use the reference of Yamagishi (413) since Yamagishi (413) does not disclose the product of a Shore D hardness of a cover inner layer and the Shore D hardness of a cover outer layer and as such, Yamagishi (413) does not disclose in any way the relationship between the product of Shore D hardness of the two layers and VR is disagreed with. Yamagishi (413) inherently has a product which includes values as claimed using the allowed hardness values disclosed and it would have been obvious to have dimples with a suitable VR as the value which is claimed for the related product as claimed.

15. With respect to item 5, the argument that there is no motivation to combine Yamagishi (563) with Yamagishi (413) is disagreed with. Yamagishi (413) discloses a golf ball yet is quiet to the type of surface. Clearly it would be obvious to have dimples since this is the best known surface in the art to have. In addition, Yamagishi discloses a golf ball with a dimple pattern that helps to improve flying distance, controllability,

straight travel, and roll upon putting (Col. 1, Lns. 51-57). Clearly these are desired characteristics for the ball of Yamagishi (413) and these characteristics would provide motivation to use the dimple pattern of Yamagishi (563) on the golf ball surface of Yamagishi (413).

16. With respect to item 6, the argument that it is improper to use the reference of Yamagishi (563) since Yamagishi (563) does not disclose a solid core having a distortion of 2.8 to 6.5 mm under a load of 100 kg or a product of Shore D hardness in relationship to VR is disagreed with. For claim 4, Yamagishi clearly shows a distortion value as defined by the claims (Col. 3, Lns. 42-52, 2.5-5.0 mm) and consistent with the distortion values of Yamagishi (413) (Fig. 2, 3.5 mm or higher). Yamagishi (563) was not used to show a product between outer and inner layers hardnesses of a cover. Yamagishi (413) was used to show this teaching. Clearly Yamagishi (563) will have a product between an outer and inner layer of a cover. Yamagishi (563) has an outer layer having a hardness value which includes the range disclosed by Yamagishi (413). Yamagishi (563) is quiet with respect to an inner layer hardness value but clearly would have a hardness value.

17. With respect to item 7, the argument that it is improper to use the reference of Yamagishi (413) since it would not be obvious to vary the value VR to be with the required relationship to the product of Shore D hardness is disagreed with. The claims do not require a golf ball to vary the value of VR to be with the required relationship to

Art Unit: 3711

the product of hardnesses. The claim requires dimples to satisfy any one of the combinations and the argument addressed one of the combinations.

18. With respect to item 8, the argument that it is improper to combine the references of Hayashi (942) and Yamagishi (563) since Hayashi discloses a thread wounded ball and Yamagishi (563) discloses a multi-piece solid ball each having fundamentally different dynamic characteristics is disagreed with. Both multi-piece solid balls and threaded wounded balls utilize dimple patterns on the surface to improve flying performance. Hayashi discloses a thread wounded ball having a cover surface with dimples in a conventional pattern (Col. 4, Lns. 26-31). The examiner is not aware of conventional patterns for only thread wounded balls and conventional patterns for only multi-piece solid balls. Yamagishi (563) discloses a dimple pattern which is a suitable selection for thread wounded balls and multi-piece solid balls since the dimple pattern helps improve flying distance, controllability, straight travel and roll upon putting all characteristics that all balls would benefit from.

19. With respect to item 9, the argument that it is improper to combine the references of Hayashi (942) and Yamagishi (563) since there is no motivation to do such is disagreed with. See item 18 above.

20. With respect to item 10, the argument that it is improper to combine the references of Hayashi (942) and Yamagishi (563) since Yamagishi (563) does not

Art Unit: 3711

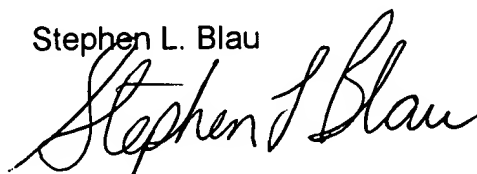
disclose a relationship between the product of Shore D hardness and dimple configuration is disagreed with. The product of Shore D hardness is inherent for the ball of Hayashi and a suitable dimple configuration would have been selected of which Yamagishi (563) discloses.

21. In closing, the following is reiterated. Every ball which has two cover layers will have a product of hardnesses. Almost every ball has dimples on a surface to improve a balls flight. The claimed hardness values, product and dimple configurations (VR,VO) as defined by the claims are obvious and suitable selections.


For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Stephen L. Blau



Conferee


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September 21, 2001

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